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U.S.S.N. 08/765,108
Filed: March 27, 1997
AMENDMENT

In the Claims

1-10. (cancelled)

11. (currently amended) An isolated nucleic acid molecule encoding a functional scavenger receptor protein type BI which selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein in cell medium containing 10% serum, wherein the binding of acetylated low density lipoprotein to the scavenger receptor protein type BI is inhibited by native low density lipoprotein, and the isolated nucleic molecule which hybridizes to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA molecule consisting of SEQ ID NO:3 or 7.

12. (previously presented) The molecule of claim 11 expressed in cells selected from the group consisting of adipocytes, lung cells and liver cells.

13. (previously presented) The molecule of claim 11 hybridizing under stringent hybridization conditions at a temperature greater than 25°C below the melting temperature of a perfectly base-paired double-stranded DNA to a molecule with Sequence ID No. 3.

14. (previously presented) An isolated nucleic acid molecule encoding a scavenger receptor protein having the sequence of Sequence ID No. 3.

15. (previously presented) An isolated nucleic acid molecule encoding a protein with the amino acid sequence shown in Sequence ID No. 4.

16-18. (canceled)

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1-10. (cancelled)

11. (currently amended) An isolated nucleic acid molecule encoding a functional scavenger receptor protein type BI which selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein in cell medium containing 10% serum, wherein the binding of acetylated low density lipoprotein to the scavenger receptor protein type BI is inhibited by native low density lipoprotein, and the isolated nucleic molecule which hybridizes to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA molecule consisting of SEQ ID NO:3 or 7.

12. (previously presented) The molecule of claim 11 expressed in cells selected from the group consisting of adipocytes, lung cells and liver cells.

13. (previously presented) The molecule of claim 11 hybridizing under stringent hybridization conditions at a temperature greater than 25°C below the melting temperature of a perfectly base-paired double-stranded DNA to a molecule with Sequence ID No. 3.

14. (previously presented) An isolated nucleic acid molecule encoding a scavenger receptor protein having the sequence of Sequence ID No. 3.

15. (previously presented) An isolated nucleic acid molecule encoding a protein with the amino acid sequence shown in Sequence ID No. 4.

16-18. (canceled)

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19. (previously presented) The molecule of claim 11 which encodes a human scavenger receptor.

20. (previously presented) The molecule of claim 11 labeled with a detectable label.

21. (previously presented) An expression vector comprising the molecule of claim 11 encoding the scavenger receptor protein.

22. (previously presented) A host cell comprising the nucleic acid molecule of claim 11.

23-43. (cancelled)

44. (currently amended) A method for screening for a compound which alters the binding of scavenger receptor protein type BI, which is encoded by a nucleotide molecule hybridizing to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA molecule consisting of SEQ ID NO:3 or 7 and which selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein in cell medium containing 10% serum, wherein the binding of acetylated low density lipoprotein to the scavenger receptor protein type BI is inhibited by native low density lipoprotein, comprising

providing reagents for use in an assay for binding of low density lipoprotein or modified low density lipoprotein to the scavenger receptor protein the reagents comprising SR-BI, low density lipoprotein or modified low density lipoprotein, and means for determining if the low density lipoprotein or modified low density lipoprotein is bound to the scavenger receptor protein,

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adding the compound to be tested to the assay, and

determining if the amount of modified low density lipoprotein or low density lipoprotein which is bound to the scavenger receptor protein is altered as compared to binding in the absence of the compound to be tested.

45. (previously presented) The method of claim 44 wherein the assay includes a cell expressing the scavenger receptor protein and the compound is a nucleic acid molecule which alters expression of the scavenger receptor protein.

46. (previously presented) The method of claim 44 wherein the compound is selected from a library of compounds which are randomly tested for alteration of binding.

47. (previously presented) The method of claim 44 wherein the compound competitively inhibits binding of low density lipoprotein or modified lipoprotein having the characteristics of acetylated low density lipoprotein to the scavenger receptor protein.

48. (currently amended) A method for removing low density lipoprotein from patient blood comprising reacting the blood with immobilized scavenger receptor protein type B, wherein the scavenger receptor protein type B is encoded by a nucleotide molecule hybridizing to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA molecule consisting of SEQ ID NO:3 or 7 and selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein in cell medium containing 10% serum, under conditions wherein the low density lipoprotein is

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bound to the scavenger receptor, wherein the binding of acetylated low density lipoprotein to the scavenger receptor protein type BI is inhibited by native low density lipoprotein.

49. (currently amended) A method for inhibiting uptake of lipoprotein or lipids by adipocytes comprising

administering a compound selectively inhibiting binding of lipoprotein to the scavenger receptor protein type BI, wherein the scavenger receptor protein type BI is encoded by a nucleotide molecule hybridizing to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA molecule consisting of SEQ ID NO:3 or 7 and selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein, under conditions wherein the low density lipoprotein is bound to the scavenger receptor wherein the binding of acetylated low density lipoprotein to the scavenger receptor protein type BI is inhibited by native low density lipoprotein.

50. (currently amended) A method for screening patients for abnormal scavenger receptor protein activity or function comprising

determining the presence of scavenger receptor protein type BI, wherein the scavenger receptor protein type BI is encoded by a nucleotide molecule hybridizing to SEQ ID Nos. 3 and 7 under moderately stringent hybridization conditions at a temperature of approximately 25°C below the melting temperature of a perfectly base-paired double-stranded DNA consisting of SEQ ID NO:3 or 7 and selectively binds to low density lipoprotein and to modified lipoprotein having the characteristics of acetylated low density lipoprotein, wherein the binding

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of acetylated low density lipoprotein to the scavenger receptor protein type B1 is inhibited by native low density lipoprotein, and

determining if the quantity present or the function of the receptor is equivalent to that present in normal cells.

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Respectfully submitted,



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